

## 1) PROJECT OVERVIEW

Explain your project overall and include the following elements:

The Qwuloolt Estuary Restoration Project represents a broad-based interagency and community effort to restore historic tidal processes and a functioning estuary intertidal marsh system to 350 acres of isolated floodplain within the lower Snohomish River estuary. The project will also restore natural hydrologic connection and functions to two stream systems and provide unrestricted fish access to 16 miles of upstream spawning and rearing habitat. Restoration will involve breaching the levee along Ebey Slough, installing a setback levee to protect adjacent properties located in the floodplain, filling ditches, excavating stream and tidal channels, and planting native shrub and tree species in shoreline riparian areas. This project requests **\$500,000** in Puget Sound Acquisition & Restoration funds for construction activities specifically setback levee construction, levee breach, and project management tasks. PSAR funds will supplement \$1,270,000 in tribal and state funds to meet a 35% local cost-share obligation for working with the US Army Corps of Engineers under the Puget Sound and Adjacent Waters Program. Project cost is \$5,083,000. Additional federal funds will be used for interior site preparation (i.e. ditch filling, channel excavation, riparian planting). Total project cost is \$7,800,000. However, only a fraction of this full amount is reflected in the grant funding request.

a) List your primary project objectives.

Project Objectives are to:

- Restore natural tidal and riverine processes to 350 acres of historic estuary
- Restore fish access to 350 acres of critical rearing habitat
- Restore natural hydrologic connection to two small stream systems
- Restore unrestricted fish access to 16 miles of upstream spawning and rearing habitat

b) State the nature, source, and extent of the problem that the project will address.

The project area lies within the Snohomish River estuary adjacent to Ebey Slough, a distributary channel of the Snohomish River, approximately three miles upstream from its outlet to Puget Sound and at the mouth of Allen and Jones Creeks. Historically, the project area was composed of tidal emergent marsh and forest scrub-shrub habitat, interlaced by tidal channels and streams (Haas and Collins 2001). At the beginning of the twentieth century, a levee was constructed on the north bank of Ebey Slough and tide gates were installed at the mouth of Allen and Jones Creeks to convert the land to agriculture. As a consequence, the levee significantly limits access of salmon to 16 miles of upstream spawning and rearing habitat as well to more than 350 acres of now degraded and converted estuary marsh and tidal channel rearing and staging habitats. Levees and tide gates also prevent tidal processes from acting on the project area, impairing the site's many ecological functions and its ability to support salmon and other estuary species. Today, the project area is fallow agricultural land that is covered by invasive reed canary grass, thistle, and blackberries. This project will remove 2,000 linear feet of levee acting as a hydrologic and fish passage barrier and restore natural tidal and riverine processes and juvenile fish access to 350 acres of historic estuary. This project will also restore natural hydrologic connection to two stream systems and provide unrestricted fish access to 16 miles of stream habitat.

c) Describe the fish resources.

The Snohomish River estuary is the second largest in Puget Sound. The estuary is a highly productive and diverse environment that provides unique and critical habitat for federally listed Chinook, bull trout, steelhead trout and five other species of salmonids. All of these species utilize the estuary to differing degrees for feeding, rearing, refuge, and staging to allow for osmoregulatory changes (City of Everett 2001). Adults and juvenile salmonids migrate through the Snohomish River estuary sloughs as they move into marine waters as juveniles and return as adults to spawn (Haring 2002). The two streams within the project area, Allen and Jones Creeks, are principally utilized by Coho salmon and Cutthroat trout. Other salmonid species including chum salmon and Chinook salmon have been infrequently observed and have the potential to reestablish utilization of the stream channels within and upstream of the project area for rearing. Like the Qwuloolt project area, an extensive system of levees and other flood control devices severely restrict salmon from

accessing critical estuary marsh, tidal channel, and side channel habitat and adjacent stream systems within the Snohomish River estuary. Only 17% of the historic estuary area and 25% of the blind tidal sloughs remain within the basin. It is estimated these habitat changes have reduced Chinook production capacity within the Snohomish to between 40% and 60% of its historic level (Haas and Collins 1999).

The 2005 Snohomish Basin Salmon Recovery Plan hypothesizes that the quality and quantity of rearing habitat in the nearshore, estuary, and mainstem rivers is *the primary factor limiting* Chinook and bull trout. The Qwuloolt project will have a direct benefit on these federally threatened species and other salmonids by restoring access to limited fresh to salt water critical transitional and rearing estuary habitat and by significantly improving access to 16 miles of stream rearing and spawning habitat.

d) Discuss how this project fits within your regional recovery plan or local lead entity strategy.

The Qwuloolt Project is exceptional in both scale and value to the lower Snohomish River estuary system and salmon recovery in Puget Sound. The Snohomish River basin represents one of the few rivers in Puget Sound where the trend of estuary wetland decline may be significantly reversed. Most of the estuary was cleared, drained, and cutoff from tidal and riverine influences by an extensive network of levees, however, lands were not converted to industrial urban development. These conditions provide the opportunity for almost complete restoration of an historic estuarine system in Puget Sound. Multiple resource assessment and watershed planning efforts within the region have identified the Qwuloolt project as a priority for intertidal marsh restoration and salmon recovery. The 2005 Snohomish Basin Salmon Recovery Plan hypothesizes that the quality and quantity of rearing habitat in the nearshore, estuary, and mainstem rivers is *the primary factor limiting* Chinook Salmon and Bull Trout. The Qwuloolt project will have a direct benefit on these federally threatened species, as well as Steelhead Trout, and other salmonids by restoring access to limited fresh to salt water critical transitional estuary habitat and by significantly improving access to miles of stream rearing and spawning habitat.

Specifically, the Qwuloolt project will contribute to restoration of 350 acres of the 2,700 acre target for estuarine habitat restoration as outlined in the Salmon Recovery Plan and improved fish access to 16 miles of upstream habitat.

e) Has any part of this project been previously reviewed and/or funded by the Salmon Recovery Funding Board? Previous Salmon Recovery Funding Board (SRFB) and Puget Sound Acquisition and Restoration (PSAR) grants supported earlier Acquisition (01-1290), Feasibility (04-1587), and Design (07-1624) phases of the Qwuloolt Project. In addition, the project was awarded a PSNER ESRP (06-1141) and RCO ALEA (06-1604) grants as well as a number of federal grants. All of these grants together have provided critical properties, information, and designs that will make this project a success as we move forward to construction. This proposal represents the final phase for implementing the Qwuloolt Estuary Restoration Project after more than ten years of planning.

## 2) PROJECT DESIGN

a) Describe the location of the project.

The restoration project area is located in Snohomish County, Marysville, Washington, approximately three miles upstream from Puget Sound on Ebey Slough. The project area is a part of the Snohomish River *estuary*.

b) Describe the project design and how it will be implemented.

### ***Design Process***

Project designs at the 35% level are included as part of this project proposal. These designs were prepared by Phillip Williams and Associates (PWA) with oversight by the Qwuloolt planning partners including USFWS, NOAA, Ecology, and Tulalip. In addition, the US Army Corps of Engineers provided detailed review of the project plans including a Dr Checks Evaluation and a Value Engineering Analysis. Value Engineering was completed by an independent review team including engineers, hydrologists, and biologists. Their analysis

resulted in several design modifications intended to improve project benefits and reduce costs. As a result, the Plan Sheets included in this proposal are already being modified. Designs include the following features intended to promote tidal marsh restoration while maintaining existing levels of flood protection: a new levee, runoff storage basin, levee breach, stream and tidal channel excavation, ditch fill, and other internal site design features. Site preparation activities are also discussed. PSAR funds, in combination with other tribal and state funds and US Army Corps of Engineers cost-share, will be used to complete the levee and levee breach. Other project tasks are described to provide a complete picture of restoration tasks.

#### ***Levee Improvement***

4,000 ft of levee will be constructed along the western edge of the project to prevent flooding and protect existing infrastructure. To the south the levee will tie into an existing levee system on Ebey Slough. To the north, the levee will tie into a high ground terrace. The levees are designed to maintain existing levels of flood protection for infrastructure already located in the floodplain. Design criteria considered the existing level of flood protection, wind wave run-up associated with restoration, predicted future sea level rise by 2050 (0.5 ft per recommendation by the USACE, Mote et al, 2008), and soil stability and settlement. USACE, PWA and project partners completed several hydraulic and geotechnical analyses to evaluate these criteria and determine specific design features of the levees. These analyses resulted in a 14.2 foot levee crest elevation. The preliminary design drawings for the levee (35% level) show a conservative crest elevation of 15 feet. This elevation is higher than the minimum crest elevation and may be altered as potential settlement is further quantified as part of ongoing geotechnical analysis.

#### ***Runoff Storage Basin***

An industrial park is located in the northeast corner of the Qwuloolt Project area and owned by the City of Marysville. The site is within the 100-year floodplain defined by FEMA (FEMA, 2005). PWA quantified runoff from the industrial park to the restoration site and defined the dimensions of a storage basin to provide water quality treatment and detention during the tidal cycle. This analysis indicated that the industrial park drainage can be managed without pumping. One-way flap gates will convey water through the levee during low tides. In the vertical, the pond's volume would be constrained between 3.0 ft NAVD at the deepest point to 5.0 ft at the highest point. The lower elevation is determined to be the minimum elevation that can still provide adequate drainage to the tidal receiving waters. Three 3-ft diameter riser pipes with flashboard risers provide enough capacity to discharge the flood retention volume within 48 hours, even accounting for storm surge and sea level rise.

#### ***Levee Breach***

PWA completed a geomorphic and hydraulic assessment to determine a breach size that would result in complete tidal restoration of the Qwuloolt project area. These geomorphic assessments were confirmed using a Pacific Northwest National Laboratory (PNNL) 3-D hydrodynamic (FVCOM) model and analysis. As designed, a large breach will be excavated to connect Allen and Jones Creek channels to Ebey Slough at a new location upstream of the historic location. Allen Creek will be redirected to flow into the lower reach of Jones Creek and together enter Ebey Slough at a point mid-way across the existing levee. This eliminates the deep channel cutting that would occur if a breach were excavated at the current mouth of Allen and Jones Creeks. This arrangement will eliminate erosion concerns adjacent to the City's waste water treatment plant. The initial breach is designed to be approximately 260 ft wide and 20 ft deep (relative to Mean Higher High Water, MHHW). To enhance tidal exchange between Ebey Slough and the restoration site, the existing levee will be lowered to an elevation of 9 ft on either side of the main breach. The total length of lowered levee is approximately 1,800 ft.

#### ***Stream and Tidal Channel Excavation, Ditch Fill, and Other Internal Design Features***

Existing drainage ditches within the restoration site are large and linear and not consistent with a natural channel network. To reduce the potential for these ditches to capture tidal flow, they will be filled. Materials excavated from the levee breach, levee lowering, and water run-off basin will be used to fill ditches. In addition, a portion of Allen Creek currently ditched and running alongside to the industrial park will be restored to a natural meander. Small dendritic tidal channels will be excavated in locations to enhance tidal channel formation. Material, as available, may also be placed within the project area in locations to dissipate wave energy and enhance estuary marsh restoration. Material would be placed to elevations that result in inundation frequencies and durations conducive to rapid re-establishment of native vegetation. This will

provide site diversity in the early years following tidal restoration by increasing topographic diversity and complexity on the site that would otherwise be very limited at breaching. All of these internal features are designed to be consistent with historic estuary topography and natural tidal and stream processes.

#### **Site Preparation**

Site preparation activities include mowing and disking of the project area to remove vegetation biomass and expose soils. Although we anticipate that tidal salinities and inundation frequencies will limit reed canary grass, mowing and disking is expected to help prevent this aggressive invasive species from re-establishing while also making soils available for native estuary plants to seed.

c) Describe the scale and size of the project and its proximity to protected, functioning, or restored habitats. The Qwuloolt project will contribute to restoration of 350 acres of the 2,700 acre target for estuarine habitat restoration as outlined in the Snohomish Basin Salmon Recovery Plan. In addition to the Qwuloolt project, several other large scale restoration projects are planned within the Snohomish River estuary. Together these projects, over the next five years, will restore approximately 1,200 acres of historic estuary habitat through the removal of levees and the reconnection of tidal hydrology. This scale of restoration activity focused at the ecosystem level and set within the broader watershed context provides a high likelihood of achieving ecological benefits associated with estuary ecosystem restoration, specifically the salmon recovery goals as outlined in the plan.

d) Describe the long-term stewardship and maintenance obligations for the project. Tulalip Tribes is the landowner of the Qwuloolt Project area and will therefore be responsible for long-term stewardship and maintenance associated with the restoration. The project was specifically designed to minimize substantial maintenance and stewardship responsibilities. However, setback levee maintenance will be the primary long-term stewardship activity. By cooperating with the US Army Corps of Engineers, we are guaranteed that the Corps will flood fight to protect and rebuild the levees during storm events so long as the levees are maintained as required. The Corps will develop a long term Operation and Maintenance Plan for the project that will outline requirements. In addition, the Natural Resources Trustees have reserved a small amount of funding to ensure that the project maintenance and monitoring are completed as necessary. In addition to maintenance, the Trustees have reserved a small amount of funding to monitor ecological parameters including fish and bird habitat quality, use, and population improvements; native plant community re-vegetation; invertebrate re-establishment; sedimentation; and tidal channel formation. Parameters and methods are being developed by NOAA and a team of local and regional restoration scientists as part of a comprehensive monitoring plan for the Qwuloolt Project and Snohomish Estuary. Monitoring will also be completed within the framework of the Snohomish Basin Salmon Recovery Monitoring and Adaptive Management Plan and completed through partnerships between the Tulalip Tribes, Snohomish County, Washington Department of Fish & Wildlife, NOAA, USFWS, and other local and regional salmon recovery and restoration partners.

### **3) PROJECT DEVELOPMENT**

a) List the individuals and methods used to identify the project and its location. Multiple resource assessment and watershed planning efforts as well as experts in the field of restoration and estuary science identify the Qwuloolt project and the proposed restoration actions as critical for intertidal marsh restoration and salmon recovery. This support provides a level of confidence that the proposed actions will achieve ecological benefits. These resource assessments include the following:

- *The Snohomish Delta Lobes Report*: A 1970's US Army Corps of Engineers study of the lower Snohomish River clearly identifies the Qwuloolt area as desirable for flood protection.
- *Snohomish Estuary Wetland Integration Plan (SEWIP)*: In 1997, the City of Everett with state and federal assistance completed an inventory of 11,518 acres of wetlands within the Snohomish River estuary. The Qwuloolt project area ranked as a **#1 priority for full-tidal restoration based on elevation, substrate, hydrology, and landscape position.**

- *Snohomish Estuary Conservation Blueprint*: The Blueprint, drafted in 1998 by People for Puget Sound, identifies the Qwuloolt project as an area that could be contributing substantially to the ecological integrity and fish habitat of the Snohomish River.
- *Snohomish River Basin Characterization*: In 1998, Washington State Department of Ecology completed a river basin characterization in which the Allen Creek basin is listed as having major alterations in all ecological processes and is identified as an urgent restoration need.
- *Snohomish River Basin Salmon Conservation Plan*: The 2005 plan produced by the Snohomish Basin Salmon Recovery Forum identifies the Qwuloolt Estuary Restoration Project as a key priority for salmon recovery in the Snohomish Basin.

b) Explain how the project's cost estimates were determined.

This project requests **\$500,000** in Puget Sound Acquisition & Restoration funds for construction activities specifically levee construction, levee breach, and project management tasks. These tasks represent the most critical restoration project elements required to achieve ecological benefits. PSAR funds will supplement \$1,270,000 in tribal and state funds to meet a 35% local cost-share obligation for working with the US Army Corps of Engineers under the Puget Sound and Adjacent Waters Program to complete these restoration elements at a total project cost of \$5,083,000. Additional federal funds will be used for interior site preparation (i.e. the run-off storage basin, ditch filling, channel excavation, riparian planting). Total project cost is \$7,800,000. However, only a fraction of this full amount is reflected in the grant funding request.

Project costs are based on the 35% design plans included as part of this proposal as well as on several design modifications suggested as part of a Value Engineering Analysis completed under the direction of the US Army Corps of Engineers and an independent review team tasked with evaluating the initial project designs to improve project benefits and reduce costs. Specific restoration tasks include: final design and engineering; construction of the setback levee and breach; and project management including contracting and construction oversight. These project costs are on a similar scale to other estuary restoration projects including a 100 acres project on Union Slough in the Snohomish River estuary completed for \$4 million, a 250 acres project on Deepwater Slough in the Skagit River estuary for \$3.5 million, and the 700 acres Nisqually Estuary restoration project estimated at \$10 million.

c) Describe other approaches, opportunities, and design alternatives that were considered.

The overall approach of the project is to create a cost effective, self-sustaining, and resilient estuary system on the site that requires minimal construction and maintenance, allows natural processes to occur and critical functions to improve, while still achieving the project objectives of restoring the condition and function of critical estuary, side channel, and stream habitats within the project area. Initially, the Trustees considered only purchasing the Poortinga property (264 acres) and using the remaining funds to construct levees around the purchased property. Instead of this approach, the Trustees decided that it would be more cost effective to purchase additional property in the floodplain in order to avoid construction of extensive setback levees and provide more restoration benefit in the project area. Since that time, an additional 100+ acres of property have been acquired and included within the project area. In addition, several breach options were considered. The sponsored a US Army Corp of Engineers study evaluating the minimum levee breach size required to restore tidal influence to the project area. This study found that larger breaches allow tides within the project area to more closely approach those in Ebey Slough. The Puget Sound Nearshore technical science team also recommended full levee removal to reestablish historic and natural estuarine processes. Restoration will consist of removing a portion substantial portion of the levees (i.e. 2,000 ft), allowing tidal exchange to regularly flood the restoration site. By reconnecting the site to the tide, the project will recreate conditions favorable the natural re-establishment of estuarine and palustrine habitats. Project designs reflect this approach.

d) Describe the consequences of not conducting this project at this time.

The Qwuloolt Project is more than 10 years in the making and now is the time to implement on-the-ground restoration of this critical estuary habitat project. The **\$500,000** we request from PSAR will be used as local

match in a cost-share agreement with the US Army Corps of Engineers under their Puget Sound and Adjacent Waters Restoration Program. If we are unable to meet our local cost-share obligation of 35% of the total project cost then we will be unable to leverage \$3,313,000 million in federal funding necessary to complete the project. We have pursued every opportunity for funding for this project and have been fortunate to be supported by RCO and other state grant programs as well as a number of federal restoration programs. However, the scale of this project (and associated benefits) is great and the PSAR funds requested are absolutely critical to project implementation. Again, if we are unable to meet our cost-share obligations, the US Army Corps of Engineers will be unable to partner with us at this time and we will have to continue to seek other grant funds on the scale of more than \$3 million in un-met need. This would delay the project by more than a year.

- e) Describe any concerns about the project raised from the community and how you addressed them.

***Improving Opportunities for Public Access and Recreation***

Improving opportunities for public and access and recreation has been one of the primary concerns raised by the City of Marysville (Parks and Recreation and Planning Commission). Tulalip Tribes and the Natural Resources Trustees have worked directly with the City of Marysville at every junction of the planning and design process and explicitly included a design objective for improving public access opportunities. Specific design components and planning actions that reflect this commitment include: maintaining a portion of levee at either end of the breach location to allow for trail connections to City owned property; tribal and city cooperation in purchasing floodplain and shoreline areas to increase restoration area, decrease construction costs, and increase publicly owned land adjacent to the project area; and tribal and city commitment to apply for future recreation and outreach grants to improve recreation and education opportunities. However, it is also important to note that trails has been one of the most vocally supported and the most vocally *opposed* project element. We therefore chose to address specific public access elements at the Qwuloolt as a partner to the City in their overall public access planning process for their newly acquired park lands.

***Protecting Adjacent Landowners and Infrastructure from Flooding***

As described in the design section of this grant proposal maintaining existing levels of flood protection has been the primary design consideration balanced with maximizing the restoration of natural processes. Our primary tactic for addressing this concern and design challenge has been to purchase as much of the floodplain as possible. This increases the overall scale of restoration, decreases the costs associated with constructing expensive set-back levees, and reduces the risk to adjacent landowners and infrastructure. Our second approach to protecting adjacent landowners has been to complete extensive data collection and hydrologic modeling to build appropriate and protective flood control structures. The designs for the levees reflect these design features. And lastly, we sought direct input throughout the design and planning process from the diking district and businesses located behind the new setback levee and with the City of Marysville. This included preparing very well written technical memos and technical presentations from our design team (Philip Williams and Associates and US Army Corps of Engineers) for neighbors and interested individuals in the hopes of improving understand of this complicated and concerning issue.

***Minimizing Downstream Erosion from Tidal Action***

Like the flooding concern, downstream erosion due to tidal restoration has been a critical design consideration. To address this concern, we completed additional hydrodynamic modeling to further quantify the risk from tidal erosion. We spent a considerable amount of time soliciting feedback from technical experts from various agencies (including the US Army Corps of Engineers, Snohomish County, WA Department of Transportation, City of Marysville Public Works) to review the results of modeling and come to an understanding of level of risk. In addition, we changed the location for the breach to Ebey Slough to avoid the potential for erosion into the City's Wastewater Treatment Facility.

***Cultural Resources Protection***

Several cultural resources have been completed on the Qwuloolt site. Records searches indicate that no properties listed on the National Register of Historic Places (NRHP) or the state listings are located within

the proposed area of effect. Based upon on-site surveys, under the preferred alternative there is an anticipation of no effect. WA State Historic Preservation Officer concurs with the determination. However, because there is still the potential for discovery of historic and cultural resources during construction, Tulalip Tribes cultural resources monitors will oversee every aspect of construction.

f) Include a Partner Contribution Form.

Currently Tulalip Tribes is partnered with the US Army Corps of Engineers under their Puget Sound and Adjacent Waters Program in a Feasibility Cost Share Agreement (FCSA). We are in the process of finalizing a decision document which will allow the Corps to enter into a Project Cooperation Agreement (PCA) with the Tulalip Tribes to cost-share the \$5,083,000 in total restoration project costs for levee construction and breach. The Partner Contribution Form documents a 15% match from the Corps (\$90,000) even though the PSAR funds will contribute to leveraging \$3,313,000 million in federal funds.

g) List all landowner names.

Tulalip Tribes owns 350 acres of the project area. Natural Resource Conservation Service (NRCS) holds a conservation easement on 267 of these acres. Tulalip also holds easements on an additional 20 acres. A landowner willingness form was completed for this project when applying for earlier SRFB grants and is on file under 04-1587.

h) Describe your experience managing this type of project.

The Qwuloolt project is overseen by a group of representatives from federal, state and tribal agencies. This oversight group works cooperatively to review and approve project plans and implementation actions. Staff from the Tulalip Tribes will act as the project manager to oversee project administration and coordination. Tulalip Tribes have significant experience implementing grants, and planning and implementing restoration projects. The Natural and Cultural Resources Department has managed over 3 million dollars annually in grant funding over the past 5 years. In addition, Tulalip Tribes have successfully managed three SRFB/PSAR grants associated with the Qwuloolt Project. Through a cooperative agreement with Tulalip Tribes, the US Army Corps of Engineers (Corps) has been the lead federal project partner throughout the feasibility and design phase of the project. The Corps' expertise in hydrology, hydraulics, soil science, and engineering and experience building and maintaining levees has been an invaluable contribution to the Qwuloolt project during design and permitting. We will continue to work with the Corps through final design and construction bid and contracting as well as throughout construction.

<b>Project Management</b> Kurt Nelson, Tulalip Tribes Maria Calvi, Tulalip Tribes Pat Cagney, USACE  <b>Grant Manager (SRFB/PSAR)</b> Kay Caromile, RCO	<b>Oversight</b> Tulalip Tribes Board of Directors Judy Lantor, USFWS (Natural Resource Trustee) Jason Lehto, NOAA (Natural Resource Trustee) Craig Thompson, WA DOE (Natural Resource Trustee) Tom McKinsey, Tulalip (Natural Resource Trustee) Kathy Kilcoyne, NRCS (conservation easement holder)
<b>Technical Support</b> Zac Corum, Hydraulic Engineer, USACE Greg Segel, Geotechnical Engineer, USACE Lee Ford, Civil Engineer, USACE Dave Carlton P.E., ESA Adolfson (design support) Zhaoqing Yang, PNNL (hydrodynamic modeling) Tarang Khangoankar, PNNL (hydrodynamic modeling) Bob Battalio M. Eng P.E., Philip Williams and Associates (35% designs) Casey Rice, NWFSC NOAA (monitoring) Phil Roni, NWFSC NOAA (monitoring) Blake Feist, NWFSC NOAA (monitoring) Greg Hood, Skagit System Cooperative (monitoring)	<b>Environmental Compliance</b> Ann Root, ESA Adolfson (permit support) Rob Whitlam, WA State Historic Preservation Officer (National Historic Preservation Section 106) Richard Young, Tulalip Tribes Cultural Resources (National Historic Preservation Section 106) Randy McIntosh, NMFS (ESA Section 7) Martha Jensen, USFWS (ESA Section 7) Pat Cagney, USACE (NEPA/Clean Water Act 404) Geoff Tallent, DOE (CZM/Clean Water Act 401) Jamie Bails, WDFW (HPA) Cheryl Dungan, City of Marysville (SEPA, Shoreline, Clear & Grade, Building)

#### 4) TASKS AND SCHEDULE

Project Management		Construction	
Secure Funding PSAR, NOAA	Aug 2009	Contracting	Sep 2009
Sign USACE Agreement	Aug 2009	Survey and Layout	Sep 2009
		Interior Site Prep	Fall 2009
Designs and Permitting		Channels and Ditch Fill	Fall 2009 - 2010
NEPA	Jul 2009	Levee and Stormwater Basin	2010 and 2011
Clean Water Act 404	Jul 2009	Breach	Summer 2011
HPA	Jul 2009	Monitoring and Maintenance	
SEPA and City Permits	Aug 2009	Native Planting	2011-2016
65% & Engineering Review	Aug 2009	Levee Maintenance	annually
95% & Bid Package	Aug 2009	Monitoring & Reporting	annually

#### 5) CONSTRAINTS AND UNCERTAINTIES

State any constraints, uncertainties, possible problems, delays, or unanticipated expenses that may hinder completion.

##### ***Funding***

Our greatest uncertainty at this time is funding. We have secured \$1,270,000 of the overall \$1,770,000 in local and state funds required to meet a 35% cost-share requirement to enter into a Project Cooperation Agreement with the Corps to complete the levee construction and breach. Although, budget costs are based on preliminary designs we are fairly confident in these budget estimates and expect that if awarded a PSAR grant, we will have enough local and state funds to meet our cost-share obligations. We also have some additional federal funding that we plan to use to complete interior site work and build the detention facility behind the new setback levee.

##### ***Permits***

The Qwuloolt project will comply with all federal, state, and local environmental laws. The NEPA determination and 404 are still in progress. The US Army Corps of Engineers is acting as the lead agency and will submit and secure these permits through their decision document process. In addition, the State HPA and local City of Marysville permits are still in progress. Informal pre-submittal consultation has been on-going with both agencies and we anticipate securing required approvals and permits by August 2009. Although Permits are not yet secured we anticipate securing these permits shortly.

##### ***Community Support***

A critical aspect of the Qwuloolt Project has been to balance community needs with ecological goals for restoration of an estuary system. By working with and listening to the public, we have attempted to reduce the potential for conflict and garner community support. Specific community outreach has included regular planning meetings with project partners including the City of Marysville Planning and Development, Public Works, and Parks Department staff as well tribal, state, and federal agency representatives. We have also met annually with representatives from the Diking District and local businesses. In 2006, we hosted a Public Informational Meeting and Open House that was attended by over 50 community residents. The open house was hosted jointly by the Tulalip Tribes, Trustees, and the City of Marysville's Planning Commission. Following the public meeting, an article in the Everett Herald summarized some of the key project objectives and community concerns, and solicited additional public comments. Public concerns and input were incorporated into the final design. In 2007, we solicited a second round of design input from industrial park businesses and individuals located along the new setback levee alignment. Landowners agreed to the proposed general alignment for the levee and approved of the Allen Creek relocation plans. Special outreach events have included two earth day celebrations in 2007 and 2008. Over 400 people attended the events with more than 80 people (children and adults) visiting the restoration site. Plans for restoring Allen and Jones Creeks and the Qwuloolt Marsh were well received by those who attended. Finally, through direct contact with interested neighbors we provide on-going updates on designs and the planning process, we answer questions, and meet neighbors on site to keep those who are interested up to date as the project progresses.